

“Azar”) in view of US Patent No. 3,885,239 (hereinafter “Zaleski”). These obviousness rejections are traversed as is explained here.

Reference and incorporation are made here to the discussions set out in the Amendment In Response To Non-Final Office Action filed on February 11, 2005 for this application. In particular, discussions from that Amendment set out from page 11 to page 17 directed to overcoming 35 USC §102 rejections reported in the Office action mailed August 11, 2004 are incorporated here. Those 35 USC §102 rejections were directed to the same claims as are here rejected under 35 USC §103. Further, those rejections were premised from the same Azar publication. Now, with respect to those anticipation rejections, it is reported in the final action that they are withdrawn in view of the February 11, 2005 submitted claim amendments and remarks.

Obviousness rejections of these same claims in the current final action are asserted as being made on new grounds. These new grounds are reported as arising from a conclusion of obviousness based on Azar not disclosing or suggesting a “probe having a microwave cavity and pointed tip.” (Final Office Action, p. 2, para. 2), and further from Zaleski disclosing such structure. In particular, the statement as to what Azar fails to disclose or suggest is reported in the final action with respect to independent claims 22 and 53. No other rejected claims, aside from claims 22 and 53, are independent, and so if these two independent claims are nonobvious then all claims reported as being rejected also are nonobvious.<sup>1</sup>

To address the failures of Azar it is stated in the final action that:

Apparatus of Zaleski as disclosed in fig. 2 used for modulating radio frequency energy directly by acoustic energy with improved operating characteristics [see lines 25-58 of column 3]. Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify probe of Azar as taught by Zaleski to obtain improved...operating characteristic. (Final Office Action, pp. 2-3, para. 2)

Before here addressing what Azar and Zaleski do or do not disclose or suggest, the procedures directed at MPEP §706.029(J) are set out:

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<sup>1</sup> “Dependent claims are nonobvious under 103 if the independent claims from which they depend are nonobvious.” (Citation omitted, In re Fine, 5USPQ2d 1596, 1600(Fed. Cir, 1988))

35 USC §103 authorizes a rejection where to meet the claim, it is necessary to modify a single reference or to combine it with one or more other references.

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To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). See MPEP §2143 - §2143.03 for decisions pertinent to each of these criteria. (Emphasis Added)

What are to be addressed here are “suggestion or motivation...to modify...or combine reference teachings,” and thereafter any existence of “a reasonable expectation of success.” Before addressing these criteria for establishing a *prima facie* case of obviousness, the Azar and Zaleski disclosures now are reviewed.

First, as stated above, all discussions from the February 11, 2005 Amendment directed to the Azar disclosure concerning a probe having a microwave cavity and tip structure are incorporated here. In particular from those discussions, Applicants note that Azar disclose a microstrip line resonator having a probe electric-dipole structure formed from an extended pair of wires shaped to have an open gap between wire ends, e.g., see Azar figure 1(b). Claims 22 and 53 in contradiction recite a probe having a pointed tip that does not read on the Azar pair of wires having a gap, nor does such Azar paired wire structure suggest the claimed subject matter. Such Azar failures are conceded in the final action.

Next, with respect to the Zaleski disclosure, the following are reproduced from that patent:

[T]he invention comprises a hollow, generally cylindrical conductive body the interior of which is divided into two chambers [24,29] by means of a septum [25] having an axial aperture. One end wall of the cylindrical body is comprised in part of a flexible conductive diaphragm [16] capable of being moved by acoustic energy impinging thereon. The other end wall includes an axial insulating bushing [28] through which a

conductive rod [33] is threaded. The rod extends through the aperture in the septum and has one end positioned adjacent to the diaphragm. The other end protrudes from the body and constitutes a probe or antenna. Radio frequency energy of the proper frequency reaching the antenna end of the rod is transmitted to the interior where a symmetrical field is set up. Acoustic energy incident on the diaphragm alters the resonant frequency causing modulation of the radio frequency energy, a portion of which is reflected and transmitted to the antenna end of the rod. (Element numbers are identified within brackets to facilitate reference to drawings; Col. 1, line 61, to Col. 2, line 12)

Further with respect to the Zaleski conductive rod 33 it is disclosed that:

The bushing 28 has an axial aperture through which is threaded a conductive rod 33, the right end of which, as viewed in FIG. 2, is frusto-conical in shape, having a flattened tip. (Col. 3, lines 4-7)

So instead of disclosing or suggesting the claim 22 and claim 53 recited “microwave cavity probe...having a pointed tip,” Zaleski explicitly discloses “two chambers [24,29]” with chamber 24 including a conductive rod 33 having an end positioned adjacent a diaphragm 16 so that “acoustic energy incident on the diaphragm alters the resonant [radio] frequency [energy],... a portion of which is reflected and transmitted to the antenna end of the rod” that is outside the chambers. Further, Zaleski explicitly discloses that the conductive rod 33 end “is frusto-conical in shape, having a flattened tip.” Thus, the assertions in the final action that “Zaleski in fig. 2 discloses probe 33 having a microwave cavity [see Abstract and lines 31-34 of column 3] and pointed tip [tip of 33 towards 16]” is not in context with actual Zaleski disclosures at col. 1, line 61, to col. 2, line 12, and col. 3, lines 4-7 that are set out above. In particular, the Zaleski conductor rod has a “flattened tip” not a pointed tip as in recited in the claims.

Thus, Zaleski teaches away from independent claims 22 and 53 and this reference is not properly combined with Azar to disclosure or suggest the independent claim recited limitations that are under consideration here. Further, compounding the Zaleski teaching away from recited subject matter are the additional facts that Azar is directed to a “microstrip quarter wavelength...resonator...used to resolve objects with characteristic dimensions as small as a thousandth of the wavelength...” (Azar, Abstract), whereas Zaleski is directed to an “apparatus for modulating electromagnetic wave energy with intelligence

[from]...incident acoustic energy.” (Zaleski, Col. 1 lines 1-5) These not only are different apparatuses, but more to the point here, they are distinctly different apparatus applications. Applicants note that in spite of the distinctly different applications for the Azar and Zaleski apparatuses, it is asserted in the final action that “it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify [the Azar] probe...as taught by Zaleski to obtain improved...operating characteristic[s].” (Final Office Action p. 3, lines 1-3) This assertion is traversed. The supposed improvement is said to be supported in Zaleski disclosures at Col. 3, lines 25-58, (Cited in the final action at p. 2). Reference to those Zaleski disclosures finds discussion of a “more favorable signal to noise ratio inherently obtainable” by using phase modulation detection as opposed to amplitude modulation detection. (Col. 3, lines 53-58). Much more to the point as to what improvement Zaleski actually asserts for the described apparatus is his disclosure that the “general object [is]...to provide [an] improved apparatus for modulating radio frequency energy directly by acoustic energy.” (Col. 1, lines 48-50)

Azar disclosures are directed to “resolving objects” with minute dimensions and Zaleski disclosures are directed to modulating radio frequency energy with acoustic energy. These are distinct and not related purposes. Accordingly, there is no feasibility of suggestion or motivation to modify or combine these distinctly different reference teachings, and further there can be no expectation of success – reasonable or otherwise – because the Azar and Zaleski purposes are distinct and not related. Thus, there is no support or even a suggested basis for an expectation of success, the possibility of any suggestion or motivation for modification or combination of references here is effectively unrealistic.

In conclusion, it is submitted that as discussed above all rejections reported under 35 USC §103 are overcome because Azar failures are not, and can not be, addressed with Zaleski disclosures.

### **Election/Restrictions**

Claims 53-54 are reported in the final action as being directed a non-elected invention. In being withdrawn, these claims recite subject matter that can be prosecuted in a divisional application or applications claiming priority from this application.

**Power of Attorney**

On February 11, 2005 a Power of Attorney and Correspondence Address Indication Form (PTO/SB/81(11-04)) signed for the owner of this application was filed. A copy of that filed Power of Attorney document and the accompanying stamped post card are attached.

By this filed Power of Attorney the previous powers were revoked and the undersigned attorney was appointed. The final action, however, was mailed to a prior appointed attorney whose power was revoked. In accord with the filed Power of Attorney document all future correspondence is to be addressed to the undersigned attorney.

**CONCLUSION**

In view of the above discussions, it is believed that all previously pending claims, not withdrawn, are in condition for allowance, and a notice of the same is requested. Should the Examiner have any questions, requests or suggestions, he is invited to contact the undersigned attorney at the telephone number indicated below.

Dated: *July 18, 2005*

Respectfully submitted,

By 

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